

**WIMUN NEW
YORK 2026**



STUDY GUIDE

Human Rights Council

Human Rights and the new and emerging digital technologies



General Assembly

Distr.: General
20 August 2024

Original: English

Human Rights Council

Fifty-sixth session

18 June–12 July 2024

Agenda items 2 and 3

**Annual report of the United Nations High Commissioner
for Human Rights and reports of the Office of the
High Commissioner and the Secretary-General**

**Promotion and protection of all human rights,
civil, political, economic, social and cultural rights,
including the right to development**

Mapping report: human rights and new and emerging digital technologies

Report of the Office of the United Nations High Commissioner for Human Rights¹ *

Summary

The present report, submitted pursuant to Human Rights Council resolution 53/29, is a mapping of the work and recommendations of the Council, the Office of the United Nations High Commissioner for Human Rights (OHCHR), the human rights treaty bodies and the special procedures of the Council in the field of human rights and new and emerging digital technologies, including artificial intelligence. In the report, gaps and challenges are identified and recommendations on how to address them are set out, with due consideration to related United Nations system-wide work.

¹ * The present report was submitted to the conference services for processing after the deadline so as to include the most recent information.



I. Introduction

1. The present report is submitted pursuant to Human Rights Council resolution 53/29, in which the Council requested OHCHR to prepare a report, mapping the work and recommendations of the Council, OHCHR, the treaty bodies and the special procedures of the Council in the field of human rights and new and emerging digital technologies, including artificial intelligence, identifying gaps and challenges and making recommendations on how to address them, while giving due consideration to the United Nations system-wide work on new and emerging digital technologies.

An encouraging key finding of the mapping exercise was that the number of technology-related outputs developed by the United Nations human rights system has reached an astounding level. For example, in at least 135 of their reports, the special procedure mandate holders have discussed aspects of digitalization.² While mapping the work of the United Nations human rights system along thematic lines helps to capture the breadth and depth of the work and to demonstrate thematic developments and trends, the interrelatedness and indivisibility of rights and the intersectionality of topics inevitably lead to overlap. In view of the wealth and ongoing development of such material, the present report is not exhaustive, but rather provides a bird's-eye perspective to further facilitate work in the field within the United Nations human rights system.

II. Governance of the Internet and Internet-based communications

3. With the mass uptake of the Internet, the United Nations has become a venue for discussions on its economic, social, cultural and political impacts and on ways to govern it. The World Summit on the Information Society, held in December 2003 and November 2005, led to important commitments that highlighted the human rights-enabling role of the Internet and the centrality of human rights in its governance.³ The human rights system began to tackle Internet-related questions and, from the outset,⁴ highlighted the fundamental tension between the immense potential of the Internet to facilitate the enjoyment of rights, particularly expression and participation, and the risks of human rights abuses and violations.

Access to the Internet as a human rights enabler

4. The Internet is an indispensable enabler of human rights.⁵ Reports of the special procedure mandate holders have provided ample supporting analysis, nuance and detail, analysing the benefits across the spectrum of human rights.⁶ The Secretary-General⁷ and OHCHR consistently emphasize the need to achieve universal access to the Internet to ensure the full enjoyment of human rights by all.⁸ On many occasions, treaty bodies have

3 Definition

The Open-ended Working Group on the Prevention of an Arms Race in Outer Space (OEWSG on PAROS) is a United Nations forum established to develop recommendations for preventing an arms race in outer space. It was created by UN General Assembly resolution 79/512, replacing two previous Working Groups focused on space threats and practical measures for PAROS. The OEWSG's mandate is to submit recommendations on preventing an arms race in outer space in all its aspects, informed by existing relevant resolutions.

² See https://www.ohchr.org/sites/default/files/Documents/HRBodies/SP/List_SP_Reports_NewTech.pdf.
³ See <https://www.dia.int/inf/wws/docs/geneva/official/isp.html> and A/60/647.
⁴ See Human Rights Council resolution 12/16.
⁵ See General Assembly resolution 78/187; Human Rights Council resolutions 47/5, 47/16, 50/15 and 53/7; and Sustainable Development Goals, targets 9.e and 5.b.
⁶ See A/66/290, A/67/326, A/HRC/17/27, A/HRC/26/49 and A/HRC/26/49/Corr.1.
⁷ See Road Map for Digital Cooperation, United Nations, "Our Common Agenda, policy brief 5: a global digital compact – an open, free and secure digital future for all", May 2023; and A/HRC/43/29.
⁸ See A/HRC/33/9, A/HRC/34/24 and A/HRC/36/33.

underscored the importance of equal access to the Internet and digital technology.⁹ There is an urgent need, therefore, to overcome digital divides within and between countries.¹⁰

Restrictions on access to and use of the Internet

Reflecting the crucial role of the Internet and digital technologies for the realization of human rights, a large body of work has provided analyses of restrictions on access to and use of the Internet and Internet-based technologies imposed by State and non-State actors that often narrow civic space.¹¹

Legislative and regulatory instruments that unduly restrict certain human rights, such as the right to freedom of expression, by restricting the use of the Internet in a way that contravenes the principles of legitimate aim, necessity and proportionality¹² have been identified consistently as key problems.¹³ Such instruments, often carrying criminal penalties, relate to such issues as terrorism, extremist speech, national security, disinformation, hate speech, cybercrime, cybersecurity, defamation, blasphemy and morality or directly prohibit the criticism of authorities.¹⁴ The issues of online harassment, threats and cyberattacks, including via social media, are often also raised.¹⁵

Various forms of website and content filtering and blocking raise other major human rights concerns.¹⁶ State-imposed shutdowns of access to the Internet and mass communication platforms, such as social media, constitute severe human rights restrictions that have frequently been denounced in resolutions¹⁷ and by the Human Rights Committee,¹⁸ the special procedure mandate holders¹⁹ and the High Commissioner.²⁰

Disinformation, hate speech and social media governance

8. Recent years have seen an upsurge in work in three interlinked areas:

disinformation, hate speech and the governance of social media platforms.

9. Building on article 20 (2) of the International Covenant on Civil and Political Rights and article 4 of the International Convention on the Elimination of All Forms of Racial

⁹ See Committee on the Rights of the Child, general comment No. 25 (2021) and Committee on the Elimination of Discrimination against Women, general recommendation No. 39 (2022). See also C.R.C./ZAF/CO/3-6, CEDAW/C/BDN/CO/10, CEDAW/C/UKR/CO/9, E.C.12/HR/CO/3 and E.C.12/PSE/CO/1.

¹⁰ See, for example, General Assembly resolutions 78/213 and 78/265; Human Rights Council resolutions 38/5, 47/16, 50/15 and 55/29; A/66/290, A/67/326, A/74/621, A/HRC/17/27, A/HRC/26/40, A/HRC/41/40 and A/HRC/48/34; Our Common Agenda policy brief 5; Committee on the Rights of the Child, general comment No. 25 (2021); and C.R.C./ZAF/CO/3-6, CEDAW/C/BDN/CO/10, E.C.12/HR/CO/3 and E.C.12/PSE/CO/1.

¹¹ See A/76/269 and A/HRC/56/25. See also <https://www.ohchr.org/en/press-briefing-notes/2023/05/ohchr-report-digital-tech-and-civic-space-south-east-asia>.

¹² See Human Rights Committee, general comment No. 34 (2011). See, for example, Human Rights Council resolutions 49/21 and 51/9; and A/66/290, A/70/371, A/71/373, A/76/269, A/HRC/16/51, A/HRC/22/17/A44, A/HRC/31/65, A/HRC/32/38, A/78/269 and CCPR/C/KHM/CO/1.

¹³ See, for example, A/71/373, A/HRC/41/41, A/HRC/43/10, A/HRC/43/46, CCPR/C/KHM/CO/3 and CCPR/C/QAT/CO/1; and communications VNM 6/2023, LBY 3/2022, MDV 1/2022, TUR 3/2022 and response, EGY 12/2020, MYS 3/2019 and response and RUS 7/2016. All communications and replies are available at <https://www.unhcr.org/en/press-briefing-notes/2023/05/ohchr-report-digital-tech-and-civic-space-south-east-asia>.

¹⁴ See A/76/258, A/HRC/41/41, A/HRC/36/29 and A/HRC/53/31; <https://www.ohchr.org/en/press-briefing-notes/2023/05/ohchr-report-digital-tech-and-civic-space-south-east-asia>; communications HUN 12/2022, MDV 1/2022, TUR 3/2022 and response, ARM 2/2020 and response and PHL 6/2019; and CCPR/C/PHL/CO/3.

¹⁵ See, for example, A/74/486, A/HRC/17/27, A/HRC/29/32, A/HRC/35/22 and A/HRC/44/24; communications LBY 3/2022, RUS 2/2022 and response, IRN 29/2021 and response and KGP 1/2021 and response; and <http://freedex.org/wp-content/blogs.dir/2015/files/2018/05/Flavus-OOO-S88-intervention.pdf>.

¹⁶ Human Rights Council resolutions 44/20, 47/16, 49/21, 50/15 and 51/9. See, for example, Human Rights Council general comments No. 34 (2011) and No. 37 (2020). See also CCPR/C/IRN/CO/4, CCPR/C/ETH/CO/2, CCPR/C/CMB/CO/5 and CCPR/C/LKA/CO/6.

¹⁷ See A/HRC/17/27, A/HRC/35/22, A/HRC/41/41 and A/HRC/47/25.

¹⁸ See A/HRC/44/24 and A/HRC/50/35.

¹⁹

Discrimination, in combination with the overarching prohibition of discrimination, there has been extensive work on online hate speech. The Rabat Plan of Action on the prohibition of advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence provides detailed guidance on the concept of incitement to national, racial or religious hatred, while ensuring full respect for freedom of expression. The Committee on the Elimination of Racial Discrimination has provided important guidance on hate speech, in particular in its general recommendation No. 35 (2013) on combating racist hate speech.²¹ Member State-driven processes have raised online hate speech as a major concern on numerous occasions.²² The special procedure mandate holders have dedicated considerable work to hate speech, underscoring the indivisible link between freedom of opinion and expression and combating online hate speech, including reports by the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance,²³ on the promotion and protection of the right to freedom of opinion and expression (with recommendations for content moderation practices),²⁴ on freedom of religion or belief (discussing problems with domestic hate speech laws that protect religious feelings),²⁵ and on minority issues.²⁶ Moreover, gendered hate speech is receiving increased attention.²⁷ Hate speech is a priority for OHCHR, which recently developed guidance on rights-based responses to hate speech on the grounds of religion or belief and in electoral contexts and has drafted a forthcoming report on cyberbullying against persons with disabilities, for submission to the Human Rights Council.²⁸

Disinformation²⁹ became a focus of the United Nations human rights system in the second half of the 2010s. Disinformation has been the subject of resolutions,³⁰ the universal periodic review³¹ and discussions of the treaty bodies.³² Reports of the Secretary-General³³ and the Special Rapporteur on the right to freedom of opinion and expression³⁴ have included recommendations for human rights-based responses. A set of global principles for information integrity has been developed within the United Nations.³⁵

11. The governance of social media is a central issue for discussions on legislation and policies, with far-reaching implications for human rights. Many of the sources cited above regarding restrictions, hate speech and disinformation are also relevant here. The special

²¹ See also Committee on the Elimination of Racial Discrimination general recommendations No. 7 (1983) relating to the implementation of article 4 of the Convention and No. 15 (1993) on article 4 of the Convention.

²² See, for example, Security Council resolution 2686 (2023); General Assembly resolutions 77/211 and 78/213; Human Rights Council resolution 55/13; and A/HRC/26/10, A/HRC/36/8, A/HRC/49/18, A/HRC/52/13 and A/HRC/54/5.

²³ A/87/326, A/78/538 and A/HRC/26/49 and A/HRC/26/49 Corr.1.

²⁴ A/74/486.

²⁵ A/HRC/48/58.

²⁶ A/HRC/28/64 and A/HRC/46/57.

²⁷ See A/76/25/8; communication OTH 90/2023 and response; and CEDAW/C/TJK/CO/7, CEDAW/C/URY/CO/10, CEDAW/C/GBB/CO/6, CEDAW/C/CHE/CO/6 and CEDAW/C/BOL/CO/7.

²⁸ See A/HRC/22/17/Add.4, A/HRC/55/74 and A/HRC/56/31. See also <https://www.ohchr.org/en/default/files/2024-08/information-note-hate-speech-incitement-hatred-in-online-context.pdf>; United Nations Strategy and Plan of Action on Hate Speech; and A/HRC/56/31. See A/77/287.

²⁹ General Assembly resolution 76/227, and Human Rights Council resolutions 49/21 and 55/10. A/HRC/13/4, A/HRC/43/9, A/HRC/52/15 and A/HRC/54/18.

³⁰ See, for example, CCPR/C/ETH/CO/2, CCPR/C/CHN-HKG/CO/4, CCPR/C/TUN/CO/6, CCPR/C/BIH/CO/1, EC/12/BIH/CO/3, CRC/C/GE/CO/5-6 and CAT/C/CO/2; and Committee on Economic, Social and Cultural Rights, general comment No. 29 (2020), A/77/287.

³¹ A/77/287, A/78/288 and A/HRC/47/25. See also A/73/348, A/HRC/38/35, A/HRC/44/49, A/HRC/44/49/Add.1, A/HRC/50/29 and A/HRC/50/29/Add.1; communications BRA 6/2020, ITA 1/2018 and response, LAO 1/2014, MYA 5/2021, MYA 6/2018, MYA 1/2018 and response, PAK 3/2020 and response, QAT 1/2020 and response, RUS 4/2019, SGF 3/2019 and State response with annexes, LKA 9/2021 and response, GBR 5/2022 and response and ZMB 1/2021; and <https://www.ohchr.org/en/press-releases/2021/7/03-freedom-expression-minorities-issue-joint-declaration-a-fake-news-disinformation> (L_andID=EA-NewID=121287).

³² See <https://www.un.org/en/information-integrity/global-principles>.

procedure mandate holders have discussed social media since the early 2010s.³⁶ A 2018 report of the Special Rapporteur on the right to freedom of opinion and expression included a comprehensive human rights-based framework for content moderation and curation and their regulation.³⁷ Other reports have contained discussions on the impacts of artificial intelligence on the information space³⁸ and explanations of how content moderation can address hate speech.³⁹ Special procedure mandate holders have sent numerous communications to States and companies concerning social media governance.⁴⁰ While the universal periodic review and the concluding observations of human rights treaty bodies have raised social media-related issues on many occasions, the ensuing recommendations do not provide detailed guidance on governance. General comments⁴¹ have set valuable general guidelines but have not provided social media-specific governance frameworks. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recently finalized guidelines for the governance of digital platforms.⁴²

Technical standards

12. Technical standards are increasingly recognized as instrumental in shaping the evolving digital environment, with significant human rights effects. At the request of the Human Rights Council, OHCHR published a report on the topic in 2023 and is working with standard-setting organizations, such as the International Telecommunication Union, and stakeholders on better integrating human rights considerations into standard-setting processes.⁴³

III. Surveillance, datafication and artificial intelligence

13. For decades, United Nations processes have recognized the human rights threats linked to the ever-increasing ability of digital systems to collect and process data and to surveil. Early examples include the Guidelines for the regulation of computerized personal data files and Human Rights Committee general comment No. 16 (1988) on the right to privacy. In the past 15 years, attention to those issues has increased. Numerous resolutions on the right to privacy in the digital age have addressed a broad range of topics relating to surveillance and data governance. In 2015, the Human Rights Council established the Special Rapporteur on the right to privacy.

A. Surveillance

14. Concerns have been raised consistently within the United Nations human rights system about surveillance by government agencies, including the mass and targeted interception of communications, access to and the collection of communications-related data, intrusion into electronic devices through hacking and the surveillance of public spaces online and offline, increasingly through biometric and artificial intelligence-based technologies.

3 Interesting Facts

During these sessions, the experts examined several key issues. They looked at the growing ability of states to use space for both peaceful and potentially military purposes, for example, satellites used for communications, navigation, and surveillance that could also be used in ways that might threaten security. The Group reviewed the current legal and policy framework, including the Outer Space Treaty and related UN resolutions, to see whether existing rules are strong enough to prevent an arms race in space. They also discussed possible elements of a new legally binding agreement, including how to define space weapons, how to verify compliance, and how countries could build trust and share information. Some proposals even raised the question of banning the placement of weapons in outer space altogether.

5 Interesting Facts

The Conference on Disarmament (CD) is the UN's primary multilateral disarmament negotiation forum, established in 1979 as a successor to earlier committees. With 65 members organized into regional groups, it operates by consensus and maintains a permanent agenda covering nuclear weapons, outer space, and conventional arms. The CD has successfully negotiated major treaties, including the NPT, Chemical Weapons Convention, and Comprehensive Test Ban Treaty, reporting annually to the UN General Assembly.

³⁶ See, for example, A/67/326, A/HRC/17/27 and A/HRC/26/49 and A/HRC/26/49 Corr.1.
³⁷ A/HRC/38/35, A/73/348, A/74/486. See, for example, communications BGD 2/2023, VNM 6/2023, OTH 90/2023 and response, KGOZ 3/2023 and response, OTH 229/2021, IND 8/2021 and response, BEN 29/2021 and response and DSEU 1/2017 and response. Particularly Human Rights Committee general comment No. 34 (2011); and Committee on the Rights of the Child, general comment No. 25 (2021). See <https://www.unesco.org/en/internet-trust/guidelines>. See Human Rights Council resolution 53/29; and A/HRC/53/42.
³⁸
³⁹
⁴⁰
⁴¹
⁴²
⁴³

In addition to numerous resolutions, 44 recommendations relating to surveillance have been made through the universal periodic review⁴⁵ and reflected in the concluding observations of the treaty bodies. 46 The Human Rights Committee referred to surveillance measures in its general comments No. 16 (1988) and No. 37 (2020).

Special procedure mandate holders have provided extensive analysis concerning State surveillance. The mandate of the Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while countering terrorism has repeatedly raised concerns and recommended measures to reign in surveillance-related human rights violations and abuses, including relating to the use of biometric data and spyware.⁴⁷ The Special Rapporteur on the right to freedom of opinion and expression has made important contributions, including on surveillance practices, the role of information and communications technology (ICT) in the private sector and the surveillance industry and related duties and responsibilities.⁴⁸ Special procedure mandate holders have addressed the use of new technologies against relatives of disappeared persons and adequate oversight of intelligence operations.⁴⁹ They have also sent numerous communications to States and other entities addressing surveillance-related concerns.⁵⁰

OHCHR has focused on surveillance trends and made related recommendations in several reports, including on mass surveillance, spyware, the weakening of encryption and the surveillance of public spaces in general and in the context of peaceful assemblies.⁵¹

B. Datafication, data-intensive technologies and artificial intelligence

Unlocking the value of data has been identified as key to boosting development, economic well-being and scientific discovery, while also presenting significant human rights risks. The human rights system has recognized that implementing data governance, especially data privacy and **personal data protection frameworks, is a human rights priority.**⁵² The High Commissioner and the Special Rapporteur on the right to privacy have described key challenges in that regard and outlined minimum requirements for governance frameworks.⁵³ Such considerations have grown in importance with the emergence of ever-more powerful and data-intensive systems, including artificial intelligence.

19. States have addressed human rights in the context of artificial intelligence in resolutions and in the UNESCO Recommendation on the Ethics of Artificial Intelligence.

20. The special procedure mandate holders have discussed **artificial intelligence and human rights, including in reports on the implications of artificial intelligence** for the rights

⁴⁵ General Assembly resolutions 68/167, 77/211 and 78/213; and Human Rights Council resolutions 28/16, 30/15, 30/17, 51/9 and 54/21.
⁴⁶ See, for example, A/HRC/15/11, A/HRC/41/17, A/HRC/44/9, A/HRC/52/10, A/HRC/53/11 and A/HRC/54/5.

⁴⁷ See, for example, CCPR/C/SRB/CO-4, CCPR/C/USA/CO-5, CCPR/C/KOR/CO-5, CCPR/C/IRN/CO-4, CCPR/C/UGA/CO-2 and CCPR/C/NGO/CO-4.

⁴⁸ See A/98/397, A/70/171, A/HRC/13/37 and A/HRC/52/39, and <https://www.ohchr.org/en/special-procedures/torres-terrorism/activities>.

⁴⁹ See A/HRC/23/40, A/HRC/35/22 and A/HRC/41/35.

⁵⁰ See A/HRC/37/62.

⁵¹ See, for example, communications IRN 29/2021 and response, PHL 4/2020 and response, GIB 4/2015 and response, USA 9/2016, USA 7/2017 and response, VNM 7/2015 and response and ZMB 1/2021.

⁵² See A/HRC/77/37, A/HRC/44/24, A/HRC/48/31 and A/HRC/51/17; and <https://www.ohchr.org/en/documents/iso-and-resources/digital-border-governance-human-rights-a-said-approach>.

⁵³ See General Assembly resolutions 71/199, 73/179, 75/176 and 77/211; Human Rights Council resolutions 34/7, 48/4 and 54/21; and Committee on the Rights of the Child, general comment No. 25 (2021).

⁵⁴ See A/77/196, A/HRC/39/29, A/HRC/49/55 and A/HRC/55/46; and <https://www.ohchr.org/en/special-procedures/privacy-in-the-digital-age> and <https://www.ohchr.org/en/special-procedures/privacy/annual-thematic-reports>.

5 Interesting Facts

Resolution 78/20 set up an open-ended working group to discuss responsible behavior in outer space. This group was asked to consider both legally binding measures, such as possible treaties, and political commitments, such as voluntary guidelines or transparency measures. The idea is to allow progress even if agreement on a treaty proves difficult.

Resolution 78/238 created a second working group with a stronger mandate. Its job is to begin negotiations on a legally binding treaty to prevent an arms race in outer space. This effort builds on the 2023 Group of Governmental Experts' discussions and links to the long-running work of the Conference on Disarmament, which has debated the issue of preventing an arms race in outer space (PAROS) for decades but has not yet reached consensus on starting formal treaty talks.

to freedom of opinion and expression⁵⁴ and on the right to privacy,⁵⁵ on freedom of thought,⁵⁶ on the right to education,⁵⁷ on the right to health,⁵⁸ on the rights of older persons⁵⁹ and on the rights of persons with disabilities.⁶⁰ Important insights concerning artificial intelligence have also been presented in areas such as counter-terrorism,⁶¹ extreme poverty⁶² and racism, racial discrimination, xenophobia and related intolerance associated with digital technology in general⁶³ and in the border and immigration enforcement context in particular.⁶⁴

21. In its 2021 report on new and emerging digital technologies, the Human Rights Council Advisory Committee discussed issues associated with artificial intelligence.⁶⁵

The work of the treaty bodies on artificial intelligence has put a strong focus on racial and gender-based discrimination and inequality issues,⁶⁶ often in the context of surveillance and policing measures.⁶⁷

The Secretary-General has identified artificial intelligence as a priority area for human rights engagement⁶⁸ and, in 2023, established the High-level Advisory Body on Artificial Intelligence, which is developing principles and recommendations for the international governance of artificial intelligence.⁶⁹

Artificial intelligence has been a key issue in the work of OHCHR on digital technologies. A 2020 report on new technologies in the context of assemblies, including peaceful protests, included a chapter on the rise of remote facial recognition technology.⁷⁰ A 2022 study of artificial intelligence⁷¹ contained key recommendations to States and businesses. Under the B-Tech project, OHCHR started developing guidance in 2023 on the application of the Guiding Principles on Business and Human Rights to generative artificial intelligence.⁷²

IV. Economic, social, cultural and development aspects

25. Reflecting on how digital technologies permeate all aspects of life, the United Nations human rights system has addressed many of their economic, social, cultural and development impacts, often as part of cross-cutting discussions dealing with a broad range of human rights issues. Resolutions focusing on the Internet and digital technologies have consistently underscored that technologies are driving forces in accelerating development.⁷³ The 2021 report of the High Commissioner on the right to privacy in the digital age delved

⁵⁴ A/73/48.

⁵⁵ A/73/438, A/77/198, A/78/310 and A/HRC/46/37. A/76/380, A/HRC/50/52, A/HRC/53/65, A/HRC/36/48 and A/HRC/45/14, A/HRC/49/52. See A/HRC/52/39, and <https://law.umn.edu/human-rights-center/research/issue-biometric-data-identity-terrorism>. See A/74/491, A/HRC/38/33/Add.1, A/HRC/41/39/Add.1 and A/HRC/50/38. See A/HRC/42/59 and A/HRC/44/57. See A/75/590 and A/HRC/48/76, A/HRC/47/52. See CEDAW/C/LK.C.07, CEDAW/C/JAM.C.08, CEDAW/C/OMN.C.04, CEDAW/C/DEU.C.09, CEDAW/C/ESP.C.09 and CEDAW/C/DEU.C.021-36.

⁵⁶ See Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020); Human Rights Committee, general comment No. 37 (2020); and CERD/C/ITA.CO.21, CERD/C/BIA.CO.18-28, CERD/C/THA.CO.04-8, CFCR/C/GR.CO.8 and CEDAW/C/ITA.CO.8. See A/74/821, <https://www.un.org/en/content/action-for-human-rights/index.shtml>, and <https://www.un.org/sites/un2.sites/files/our-common-agenda-policy-brief-global-dig-compact-en.pdf> f.

⁵⁷ See <https://www.un.org/en/in-a-advisory-body>, A/HRC/44/24, A/HRC/44/11. See also A/HRC/35/9 and A/HRC/39/29. See <https://www.ohchr.org/en/business-and-human-rights/b-tch-project>. Also see section VIII below. General Assembly resolutions 77/211 and 78/213; and Human Rights Council resolution 47/16.

2 Interesting Facts

Resolution 78/20 set up an open-ended working group to discuss responsible behavior in outer space. This group was asked to consider both legally binding measures, such as possible treaties, and political commitments, such as voluntary guidelines or transparency measures. The idea is to allow progress even if agreement on a treaty proves difficult.

Resolution 78/238 created a second working group with a stronger mandate. Its job is to begin negotiations on a legally binding treaty to prevent an arms race in outer space. This effort builds on the 2023 Group of Governmental Experts' discussions and links to the long-running work of the Conference on Disarmament, which has debated the issue of preventing an arms race in outer space (PAROS) for decades but has not yet reached consensus on starting formal treaty talks.

3 Interesting Facts

The United Nations Institute for Disarmament Research (UNIDIR) is an independent research body within the UN. It provides studies, practical ideas, and policy advice to support disarmament and arms control. UNIDIR also creates spaces for governments and experts to exchange views on security challenges. One of its focus areas is space security, where it works to reduce the risk of military competition in outer space through research and dialogue.

deeper into privacy as an enabler of rights, exploring the role of artificial intelligence in the context of social security and employment settings.⁷⁴ Moreover, concerns about digital divides⁷⁵ have focused consistently on economic, social and cultural rights and obstacles to development. The OHCHR report on Internet shutdowns included a discussion of the deep impact on the rights to education, health and an adequate standard of living.⁷⁶

26a 2020 report, the Secretary-General described ways in which digital technologies could promote economic, social and cultural rights and development. He presented a detailed vision for a human rights-based approach to technology that would ensure that societies benefited from digitalization while minimizing human rights harms. He highlighted core principles, including equality and non-discrimination, participation, accountability, legality, legitimacy, necessity and proportionality, inclusion, accessibility, availability, affordability, adaptability and the quality of new technologies.⁷⁷

The Special Rapporteur on extreme poverty and human rights has worked extensively on aspects of the **digitalization of government functions**, including in reports on the role of digital technologies in the context of social protection.⁷⁸ Other reports have contained analyses of the concept of universal basic income as a response to technology-related social and economic developments and set out a human rights-based approach to wages, including in the so-called gig economy.⁷⁹

The digitalization of education has been addressed in Human Rights Council resolutions and reports of the Special Rapporteur on the right to education.⁸⁰ Treaty bodies have frequently raised concerns about digital divides in education.⁸¹ The role that digital technologies can play in advancing the development of medical treatments and facilitating universal health coverage has also been recognized.⁸² OHCHR has presented a series of reports identifying access to health technologies as a fundamental building block of the right to health⁸³ and calling for equitable, affordable, timely and universal access for all countries to vaccines.⁸⁴ The Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health has raised concerns about the adverse mental health impacts of surveillance measures.⁸⁵ **Neurotechnology** is another area that has been taken up by the Council.⁸⁶

The Special Rapporteur on the right to development has indicated that digital technologies are a mandate priority and has reported on how technology companies can contribute to enabling the right to development.⁸⁷

30. The Special Rapporteur in the field of cultural rights has published reports on technology-related topics, including on the right to science⁸⁸ and the relationship between human rights and intellectual property rights.⁸⁹ The Independent Expert on the effects of

⁷⁴ A/HRC/48/31.

⁷⁵ See paras. 4, 33 and 34 of the present report. A/HRC/50/55, A/HRC/43/29, A/74/493 and A/HRC/50/18. See also A/HRC/38/33/Add.1 and A/HRC/41/39/Add.1, A/78/375 and A/HRC/35/26. Human Rights Council resolutions 47/5, 47/6 and 33/7, and A/HRC/32/37 and A/HRC/30/32. See also A/HRC/36/58/Add.1. The Special Rapporteur on the right to education will also issue a report on education and artificial intelligence; see <https://www.ohchr.org/en/calls-for-report/2024/call-contribution-artificial-intelligence-education-and-human-rights>. See Committee on the Elimination of Discrimination against Women, general recommendation No. 36 (2017); and E/C.12/IDN/CO/2, E/C.12/PRT/CO/3, E/C.12/KHM/CO/2, E/C.12/GTM/CO/4, E/C.12/COD/CO/6 and E/C.12/BOL/CO/3. See Human Rights Council resolution 49/25; and A/HRC/43/29 and A/HRC/33/85, E/2023/34, A/HRC/47/23 and A/HRC/52/36, A/HRC/48/44. See Human Rights Council resolution 53/3. See A/78/160 and A/HRC/54/27, A/HRC/55/44 and A/HRC/55/44/Corr.1, A/70/279 and A/70/279/Corr.1 and A/HRC/28/57.

foreign debt and other related international financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights, has presented a report on international financial obligations, digital systems and human rights.90

OHCHR has examined the human rights dimensions of development finance, including technology-related aspects, in, for example, a benchmarking study on development finance institutions' safeguard policies, a study on remedy in development finance and submissions to development finance institutions addressing technology-related policies and practices.⁹¹

Finally, the Office of the Envoy of the Secretary-General on Technology and the United Nations Development Programme have started developing a safeguards framework for digital public infrastructure.⁹²

V. Discrimination, equality and specific groups

The harms and benefits of new technologies are often experienced in different ways, depending upon the identity of the affected individual or group. Based on the principles of non-discrimination and equality, the human rights system has already engaged with the disparate impacts of digital technologies. That work illustrates that differentiated adverse impacts on members of certain groups often intersect and that discrimination and exclusion can be fully grasped and addressed only through an intersectional approach.⁹³ As noted above, digital divides are a major theme across the system. While there are many expressions of and contributors to digital divides, gaps in digital literacy and skills that often affect women, children and disadvantaged groups are frequently mentioned.⁹⁴

Gender digital divides have been a major concern for years.⁹⁵ In a 2017 report, OHCHR outlined a human rights-based approach to such divides.⁹⁶ Gender digital divides in education have been addressed by the Committee on the Elimination of Discrimination against Women in its general recommendation No. 36 (2017), the Committee on Economic, Social and Cultural Rights in its general comment No. 25 (2020) and the Special Rapporteur on the right to education in a 2022 report.⁹⁷ The Special Rapporteur on the right to health has addressed gender digital disparities in a report on digital innovation, technology and the right to health.⁹⁸

⁹⁰ A/HRC/32/34.

⁹¹ See <https://www.ohchr.org/en/development/development-finance-institutions>.

⁹² See <https://www.dpi-safeguards.org>.

⁹³ See General Assembly resolution 78/187; Human Rights Council resolutions 38/5, 40/12, 47/16 and 51/10, A/75/590, A/HRC/38/47, A/HRC/40/80, A/HRC/44/52, A/HRC/44/57 and A/HRC/50/25; Committee on the Elimination of Discrimination against Women, general recommendations No. 35 (2017) and No. 39 (2022); Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020); CRC/C/CRIC/CO-5-6; CRC/C/CRIC/CO-5-4; CRC/C/BOL/CO-5-4; CRC/C/VNM/CO-5-4; CEDAW/C/FRA/CO-9, CEDAW/C/ESP/CO-9, CEDAW/C/CHN/CO-9 and CEDAW/C/NZL/CO-8. See also Committee on the Elimination of Discrimination against Women, general recommendation No. 28 (2010); Committee on the Elimination of Racial Discrimination, general recommendation No. 32 (2009); and <https://www.ohchr.org/en/default/files/documents/issueminorities/30th-anniversary/2022-09-22/GIadanceNotesonIntersectionality.pdf>.

⁹⁴ See General Assembly resolution 78/213; Human Rights Council resolutions 47/16, 50/15 and 51/10; A/66/290, A/HRC/35/9, A/HRC/50/25 and A/HRC/53/65; Committee on the Elimination of Discrimination against Women, general recommendation No. 36 (2017); Committee on the Rights of the Child, general comment No. 25 (2021); and CEDAW/C/BTN/CO-9, CEDAW/C/UKR/CO-9, CEDAW/C/VEN/CO-9, CEDAW/C/CRI/CO-8 and CEDAW/C/BOL/CO-7. See Human Rights Council resolutions 23/2, 44/12, 47/5, 50/18 and 53/7.

⁹⁵ A/HRC/35/8.

⁹⁶ A/HRC/30/32.

⁹⁷ A/HRC/53/65.

11 Interesting Facts

Similar to the nuclear arms race, competition among countries to develop space-based and ground-based weapons could escalate tensions, leading to security dilemmas where defensive measures (such as ASAT) by one nation are perceived as threats by others, spurring further militarization.

12 Did You Know That

In 2024, global government expenditure for space programs hit a record of approximately 135 billion U.S. dollars. The United States Government spent around 79.7 billion U.S. dollars on its space programs in that year, making it the country with the highest space expenditure in the world. The U.S. was followed by China, with government expenditure on space programs of over 19 billion U.S. dollars.

13 Something to Think About

Countries with large military space programs often worry about hostile attacks on satellites, anti-satellite weapons, or interference with command systems. They see the potential for conflict as the biggest risk. In contrast, countries that mainly use space for civilian purposes (like communication, weather, or navigation) may see the main threats as being disruptions to services, not necessarily direct military attacks. Developing countries often worry more about being left out of access to space technology or suffering the fallout (like space debris) from conflicts between major powers.

Can you think of other differences in the perception of threats in the context of outer space?

The perception of different threats is why reaching global agreement on rules for outer space is so difficult.

digital education for young people and ensuring their protection from online threats and on the use of digital technologies to achieve universal birth registration.112

Racial discrimination in the context of digital technologies is widely recognized as a concern that cuts across the full range of human rights and such issues as hate speech, content governance, health,113 surveillance114 and artificial intelligence.115 Resolutions have addressed racism and racial discrimination consistently.116 Special procedure mandate holders frequently have addressed racism in the digital environment, including in a series of reports of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance.117 The Committee on the Elimination of Racial Discrimination devoted a large part of its general recommendation No. 36 (2020) on preventing and combating racial profiling by law enforcement officials to algorithmic profiling.

Important work on people on the move118 includes a report on the use of technology at borders by the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance.119 papers by the Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while countering terrorism120 and a study on digital border governance by OHCHR and the University of Essex.121

The Independent Expert on the enjoyment of all human rights by older persons has published a series of thematic and country reports that have shed light on digital divides, the impact of assistive and robotics technology, artificial intelligence and automation on human rights and the significance of data for protecting and promoting the rights of older persons.122 Several special procedure mandate holders and OHCHR have been contributing to the technology-related work of the Open-ended Working Group on Ageing.123

43. The intersection of the rights of persons with disabilities and digital technologies has been gaining increased visibility, with attention to the opportunities offered by digital technology as a rights enabler and the lack of access of persons with disabilities to adequate digital technology, services and content.124 In its general comment No. 25 (2020), the Committee on Economic, Social and Cultural Rights was outspoken about the deep

17 Interesting Facts

The China-Russia Draft Treaty on the Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force against Outer Space Objects (PPWT) was first proposed in 2008 and updated in 2014. It aims to ban putting weapons in orbit and using or threatening force against satellites and other space objects.

However, the United States and its allies have criticized the draft. They point out that it does not cover ground-based anti-satellite (ASAT) weapons, has no system to check compliance, and uses unclear terms such as "weapons in space" and "use of force."

This disagreement reflects strategic differences. The United States has strong space-based capabilities, while China and Russia focus on ground-based ASAT systems. Each side wants to limit the areas where the other has an advantage.

18 Definition

Transparency and Confidence Building Mechanisms (TCBMs) are a set of voluntary, non-legally binding measures designed to increase openness, foster trust, and reduce the risk of misperception, miscalculation, and escalation among States regarding their outer space activities. The goal of TCBMs in PAROS is to create a more stable and predictable space environment, even in the absence of a comprehensive, legally binding arms control treaty.

112 See Human Rights Council resolution 52/25.

113 See A/HRC/53/65. See, for example, A/HRC/44/57, A/HRC/50/49 and A/HRC/51/17. A/HRC/48/31; conference room paper of the High Commissioner on the promotion and protection of the human rights and fundamental freedoms of African and of people of African descent against excessive use of force and other human rights violations by law enforcement officers, available at https://www.ohchr.org/sites/default/files/Documents/Issues/Racism/A_HRC_47_CRP_1.pdf; and Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020). See, for example, General Assembly resolutions 77/211 and 78/213; and Human Rights Council resolutions 49/21, 51/10, 53/29 and 54/21. A/67/326, A/75/590, and A/HRC/48/76. See also A/HRC/42/59. See General Assembly resolution 76/187; and Human Rights Council resolution 53/7. A/75/590. See <https://www.ohchr.org/sites/default/files/documents/issues/terrorism/violations2021-10-30-cv-e-aveil-gotest-position-paper.pdf>; <https://law.unm.edu/human-rights-center/research/use-biometric-data-identity-terrorism/>; and A/HRC/52/39. See <https://www.ohchr.org/en/documents/tools-and-resources/digital-border-governance-human-rights-a-and-approach>. A/HRC/36/48, A/HRC/42/43, A/HRC/45/14, A/HRC/45/14/Add.1 (and comments by the State, A/HRC/45/14/Add.3) and A/HRC/51/27/Add.1. See A/HRC/52/49; working document submitted by OHCHR on substantive inputs in the form of narrative content for the development of a possible international standard on the focus areas "right to health and access to health services" and "social inclusion", available at <https://social.un.org/ageing-working-group/documents/fourteenth%20session/A.AC.278.2024.CRP.2.pdf>; and <https://www.un.org/ageing-working-group/index.shtml>. General Assembly resolutions 76/187 and 78/213; and CRPD/C/MRT/C01, CRPD/C/MNG/C02-3 and CRPD/C/38-C01.

discrimination against persons with disabilities in the enjoyment of their right to participate in and enjoy the benefits of scientific progress and its applications, outlining minimum steps to be taken to combat that discrimination. The Special Rapporteur on the rights of persons with disabilities has published a comprehensive report on artificial intelligence¹²⁵ and has also addressed digital technology and the rights of older persons with disabilities.¹²⁶ In addition, OHCHR developed a report on countering cyberbullying against persons with disabilities for submission to the Human Rights Council at its fifty-sixth session.¹²⁷

Regarding minorities and Indigenous Peoples, the human rights system has engaged with such issues as hate speech and social media, the role of Indigenous women as scientific and technical knowledge keepers and the right to science in the context of the science and traditional knowledge of Indigenous Peoples.¹²⁸

VI. International security, armed conflict and new and emerging technologies in the military domain

Like the specialized United Nations mechanisms,¹²⁹ the Human Rights Council has engaged recently with the issue of human rights law in cyberspace in international security contexts, adopting resolution 51/22, in which it requested its Advisory Committee to prepare a study for its sixtieth session examining the human rights implications of new and emerging technologies in the military domain. It has also established an open-ended intergovernmental working group to elaborate the content of an international regulatory framework, without prejudging the nature thereof, to protect human rights and ensure accountability for violations and abuses relating to the activities of private military and security companies, which would also contain a discussion of cyberspace-related matters.¹³⁰

In its general comment No. 36 (2018) on the right to life, the Human Rights Council provided a key interpretation of international human rights law as it relates to the use of new technologies in armed conflict and in the military domain. The Committee on the Rights of the Child, in its general comment No. 25 (2021) on children's rights in relation to the digital environment, affirmed that the State had a duty to ensure that children were not recruited or used in conflicts through technology-facilitated solicitation and grooming.

47. The use of drones or unmanned aerial vehicles to conduct targeted killings and the lack of transparency regarding criteria for drone strikes were among the first issues considered by human rights treaty bodies regarding the human rights implications of new technologies in the military domain.¹³¹ The Human Rights Committee has raised concerns about the practice of targeted killings in extraterritorial counter-terrorism operations using drones, the lack of transparency about such attacks and the lack of accountability for the

21 Interesting Facts

The Outer Space Treaty (OST) is a foundational piece of international law governing activities in space. It was adopted in 1967 and has been ratified by over 100 countries. Its core principles include:

- Non-appropriation: Outer space, including the Moon and other celestial bodies, cannot be claimed as sovereign territory by any nation.
- Peaceful purposes: Space should be used for the benefit and in the interests of all countries. The Moon and other celestial bodies are to be used exclusively for peaceful purposes.
- No weapons of mass destruction: The treaty explicitly prohibits placing nuclear weapons or other weapons of mass destruction in orbit or on celestial bodies.
- Liability: Nations are internationally liable for damage caused by their space objects.

21 Interesting Facts

Article IV of the Outer Space Treaty prohibits States Parties from placing nuclear weapons or other weapons of mass destruction in Earth orbit, on celestial bodies, or anywhere else in outer space. It also bans the establishment of military bases, weapons testing, and military maneuvers on the Moon and other celestial bodies. However, it allows the use of military personnel and equipment for peaceful purposes, such as scientific research and exploration.

¹²⁵ A/HRC/49/52.
¹²⁶ A/74/186, A/HRC/56/31. See A/HRC/46/57, A/HRC/51/28 and A/HRC/55/44 and A/HRC/55/44/Corr.1. See also Committee on Economic, Social and Cultural Rights, general comment No. 25 (2020); <https://www.ohchr.org/en/instruments/toronto/2020/thirtieth-session-terano-minority-invoice-and-human-rights-council-resolutions-38/5,30/17-and-53/29>. See reports of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security (for example, A/76/135 and A/70/174). See also final substantive report of the Open-ended Working Group on Developments in the Field of Information and Telecommunications in the Context of International Security, available at <https://front.un-arm.org/wp-content/uploads/2021/03/Final-report-A-AC.200-2021-CRP.2.pdf>; and programme of action to advance responsible State behaviour in the use of information and communications technology in the context of international security (General Assembly resolution 77/37). See <https://www.ohchr.org/en/hr-bodies/hrc/pjms-cs/jpgw-index-1>. See CCPR/C/USA/CO.4, CCPR/C/USA/CO.5 and CCPR/C/DEU/CO.7.

loss of life resulting from them. Several treaty bodies have considered the use, transfer and regulation of military technologies.¹³²

Special procedure mandate holders have discussed the human rights implications of technological developments in the military domain and armed conflict since the early 2010s. In several reports, the Special Rapporteur on extrajudicial, summary or arbitrary executions has discussed autonomous weapons and armed drones, including for targeted killings.¹³³ and dedicated another report to examining the use of ICT to secure the right to life.¹³⁴ The Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination has addressed questions around cyberspace and the provision of the services of mercenaries, mercenary-related actors and private military and security companies.¹³⁵ Several special procedure communications have addressed the human rights implications of new technologies in the military domain and in conflict, particularly the use of drones for targeted killings as well as the sale of military technologies.¹³⁶

VII. Rule of law and the administration of justice

The United Nations human rights system has addressed the effects of digitalization on the administration of justice. A main topic is crime investigation, with a particular focus on surveillance.

Another important topic is the digitalization of court systems, from e-filing and digitized case management systems¹³⁷ to the conduct of online hearings.¹³⁸ Issues at the enforcement stage of court decisions include the constant video surveillance of prisoners¹³⁹ and the lack of use of closed-circuit television cameras and other tools monitor police and prison guards¹⁴⁰ and of electronic monitoring as an alternative to detention.¹⁴¹ Other concerns raised include disinformation and online attacks targeting judges and lawyers.¹⁴²

51. The impacts of artificial intelligence on the administration of justice, for example when it is used for predictive policing, as an investigative tool or in the context of making sentencing, parole or release decisions, is another important area.¹⁴³ The multifaceted ways in which neurotechnology may undermine fair trial guarantees is a critical emerging field.¹⁴⁴

VIII. Role of the private sector

52. The private sector has enormous influence in the digital sphere, including through its potential to foster rights-respecting conduct. Indeed, resolutions of the Human Rights

¹³² See CRC/C/OPAC/MDA/CO/1 and CEDAW/C/ITA/CO/7; A/65/321, A/68/382 and A/86/382/Corr.1, A/69/265, A/71/372, A/HRC/23/47, A/HRC/26/36, A/HRC/29/37 and A/HRC/44/38; and conference room paper of the Special Rapporteur on extrajudicial, summary or arbitrary executions, available at <https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/sessions-regular/session56/a-hrc-36-crp-5.pdf>.

¹³³ A/HRC/29/37.

¹³⁴ A/75/299 and A/76/351.

¹³⁵ Communications USA 5/2015, YEM 1/2015, ISR 9/2014, OTH 131/2023 and ISR 8/2023.

¹³⁶ See A/79/188 and CEDAW/C/BTN/CO/10.

¹³⁷ See A/HRC/47/35 and A/HRC/47/35/Corr.1. See also <https://www.ohchr.org/sites/default/files/documents/issuances/huridocda/Brief-Ar-Online-hearings-justice-systems.pdf> and CCPR/C/111/D/2041/2011.

¹³⁸ See CAT/C/ITA/CO/5-6 and CAT/C/KAZ/CO/4.

¹³⁹ See CAT/C/AZE/CO/5, CAT/C/ROU/CO/5 and CAT/C/BIA/CO/2.

¹⁴⁰ See Human Rights Committee, general comment No. 35 (2014); and CAT/OP/MKD/1, CCPR/C/BEL/CO/3, CCPR/C/KAZ/CO/1 and CCPR/C/TUR/CO/1.

¹⁴¹ See A/HRC/53/31.

¹⁴² See A/HRC/48/31, A/HRC/51/17 and A/HRC/53/31; and Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020). See also CEDAW/C/ITA/CO/8.

¹⁴³ See Human Rights Council resolution 51/3; and A/76/380.

24 Definition

The principle of due regard, established in Article IX of the Outer Space Treaty, requires States to consider the rights and interests of other States when conducting space activities. Although not explicitly defined in the treaty, it obliges States to avoid actions that could harmfully interfere with others' peaceful use of outer space. This includes consulting with other States before and during activities that may cause such interference.

25 Something to Think About

What are the main obstacles to creating strong and effective verification measures for space arms control agreements? And how do the unique characteristics of the space environment and space objects (e.g., dual use technologies) make traditional methods of verification, such as inspections or monitoring, much harder to apply in space? And if a satellite is damaged, jammed, or interfered with, would it be difficult to determine who is responsible? If so, why would it be difficult?

Council and the General Assembly have highlighted the increasing centrality of the private sector in the context of digitalization and its relevance to safeguarding and advancing human rights,¹⁴⁵ and specific recommendations to States and businesses have increased in recent years.¹⁴⁶ The *Guiding Principles on Business and Human Rights* are consistently referred to, confirming their role as the leading framework for preventing and addressing business-related human rights harms connected to digital technologies. The *Guiding Principles* underscore **the business responsibility to respect human rights and re-emphasize the State duty to protect human rights and access to remedy for human rights harms relating to business conduct.** The report by OHCHR on the practical application of the *Guiding Principles on Business and Human Rights* to the activities of technology companies provides a comprehensive overview of the role and application of the *Guiding Principles* with regard to new and emerging technologies.¹⁴⁷

53. Other human rights mechanisms have reflected the growing attention to and more granular analysis of the human rights issues arising from business activities in the digital space. Since at least the early 2010s,¹⁴⁸ special procedure mandate holders have reflected on ways in which the enjoyment of human rights in the digital space depends upon the private sector. The Special Rapporteur on the right to freedom of opinion and expression should be mentioned, in particular, for a groundbreaking series of studies developing a clear human rights-based concept for business conduct by technology companies and an approach to the regulation of digital sectors.¹⁴⁹ The Working Group on the issue of human rights and transnational corporations and other business enterprises has devoted increasing attention to digital matters, including through the communication procedure, and has made optimizing digital transformation through respect for human rights a priority goal for the next decade for business and human rights.¹⁵⁰ Business-related aspects are considered in many other reports. They include reports of the Special Rapporteurs on the rights of persons with disabilities,¹⁵¹ on contemporary forms of racism, racial discrimination, xenophobia and related intolerance,¹⁵² on violence against women and girls, its causes and consequences,¹⁵³ on minority issues,¹⁵⁴ on the sale, sexual exploitation and sexual abuse of children,¹⁵⁵ on freedom of religion or belief,¹⁵⁶ on the promotion and protection of human rights and fundamental freedoms while countering terrorism,¹⁵⁷ on the right to privacy,¹⁵⁸ and on extreme poverty and human rights.¹⁵⁹ The Working Group on the use of mercenaries has examined the provision of military and security products and services in cyberspace by mercenaries, mercenary-related actors and private military and security companies and its human rights impacts.¹⁶⁰ Special procedure mandate holders have also addressed businesses and States on matters relating to business conduct, including domestic legal frameworks.¹⁶¹

¹⁴⁵ General Assembly resolutions 68/167 and 69/166; and Human Rights Council resolutions 26/13 and 28/16. See General Assembly resolutions 71/199, 73/179, 75/136, 77/211 and 78/213; and Human Rights Council resolutions 34/7, 42/15, 47/23, 48/4, 53/29 and 54/21. A/HRC/30/36. See, for example, A/HRC/17/27, A/73/348, A/HRC/32/38, A/HRC/35/22, A/HRC/35/22/Add.4, A/HRC/38/35 and A/HRC/41/35. See A/HRC/50/40/Add.3, A/HRC/49/52, A/87/326, A/75/590, A/HRC/26/49 and A/HRC/26/49/Corr.1 and A/HRC/44/57, A/HRC/38/47, A/HRC/46/37, A/HRC/28/56 and A/HRC/49/51, A/76/180, A/HRC/52/39, A/HRC/46/37, A/76/178. See A/76/151. See, for example, communications OTH 90/2023 and response, OTH 62/2023 and response, OTH 11/2023, OTH 10/2023, OTH 126/2022 and OTH 211/2021 and response. See, for example, communications USA 13/2024, ISR 5/2023, GBR 5/2022 and response, BRA 6/2020, IND 3/2019 and response and PAK 3/2020 and response.

26 Interesting Facts

The UN does not directly make treaties legally binding. It facilitates the treaty-making process and adopts the final draft text via resolution, but the resolution adopting the text of a treaty does not automatically bind a country to its terms. The treaty only becomes legally binding after it has been independently ratified by a sufficient number of member states through their domestic legal processes. Member states must individually sign and ratify (or accede to) a treaty for its obligations to apply to them.

30 Something to Think About

When we talk about non-legally binding measures in the PAROS context, what is the process by which "soft laws" that are not legally enforceable, can develop into binding obligations? How can the development of customary international law and the principle of good faith shape state behavior over time?

54. The Forum on Business and Human Rights¹⁶³ has increasingly considered issues relating to digital technologies.¹⁶⁴
55. OHCHR has developed extensive guidance for States and the private sector on how to address business-related human rights challenges, including in its reporting to the Council.¹⁶⁵ OHCHR has deep expertise in the application of the Guiding Principles on Business and Human Rights in the digital sphere.¹⁶⁶ Its B-Tech project¹⁶⁷ provides authoritative practical guidance and public policy recommendations on applying the Guiding Principles to the development, application and governance of digital technologies. Under that project, OHCHR has established an innovative company community of practice to provide a space for technology companies and the Office to discuss common challenges, solutions and best practices relating to incorporating human rights into company policies and processes. The project addresses business model-related human rights risks, human rights due diligence and end-use, access to remedy, investor responsibilities, the State duty to protect and the smart mix of mandatory and voluntary measures to be taken by States to respond to human rights challenges linked to digital technologies. In 2023, B-Tech launched a project focusing on generative artificial intelligence, resulting in a foundational paper,¹⁶⁸ a taxonomy of generative artificial intelligence human rights harms¹⁶⁹ and an overview of human rights and responsible artificial intelligence company practice.¹⁷⁰

IX. Summary of existing work and identification of gaps

Achievements

56. The review of the United Nations human rights system outputs relating to digital technologies revealed an impressive body of work. Its breadth and depth made it difficult to identify and adequately assess all the relevant material within the confines of the present report, confirming a key finding of the mapping: **that the human rights system has been immensely productive in responding to the manifold challenges of the digitalization of societies, even if gaps and shortcomings remain.**
57. The Human Rights Council and the General Assembly have addressed human rights issues relating to digital technologies in many resolutions, consistently affirming since 2012 that the same rights that people have offline must also be protected online.¹⁷¹ Panel

34 Something to Think About

In what way could outer space disarmament initiatives affect the national security, technological, economic, or development interests of States, and how can such efforts be balanced with the need to promote international peace and prevent an arms race in space?

35 Interesting Facts

Countries disagree on how to define key terms for preventing an arms race in outer space. These include what counts as a "weapon in outer space" (whether it only means weapons placed in orbit or also ground-based anti-satellite systems), what is meant by "peaceful purposes" (whether all military uses are banned or only aggressive ones), what actions qualify as a "threat or use of force" (from direct attacks to jamming and cyber interference), which "space objects" should be protected (all satellites or only certain ones), and what "responsible behavior" looks like (such as keeping safe distances or avoiding debris). These disagreements reflect deeper strategic differences about what activities should be restricted. What are these strategic differences and how do they feed into the disagreements over the way terms are defined? These disagreements reflect deeper strategic divides. For countries with advanced space systems, like the United States and its allies, satellites are central to military operations and economic life, and keeping rules narrow protects their ability to develop new technologies, non-destructive counterspace tools such as cyberwarfare, and even future missile defense systems. Russia and China, by contrast, push for broader bans on weapons in space, which would limit U.S. innovation in these areas while leaving their own ground-based anti-satellite programs untouched. In short, each side seeks rules that protect its strengths and constrain the other's.

¹⁶³ See <https://www.ohchr.org/en/hrc-substantive-bodies/united-nations-forum-business-and-human-rights>.

¹⁶⁴ See A/HRC/38/49, A/HRC/44/56 and A/HRC/47/50.
¹⁶⁵ A/HRC/27/37, A/HRC/35/9, A/HRC/39/29, A/HRC/48/31, A/HRC/51/17 and A/HRC/53/42.

¹⁶⁶ See A/HRC/50/45/Add.1, A/HRC/50/56 and A/HRC/50/56/Add.1.

¹⁶⁷ See <https://www.ohchr.org/en/business-and-human-rights/b-tech-project>.

¹⁶⁸ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/recommendations/advanced-responsible-development-and-deployment-of-GenAI.pdf>.

¹⁶⁹ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/taxonomy-GenAI-Human-Rights-Harms.pdf>.

¹⁷⁰ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/overview-human-rights-and-responsible-AI-company-practice.pdf>.

¹⁷¹ See, for example, Human Rights Council resolution 20/8.

discussions and other official meetings on digital themes¹⁷² have added opportunities to deepen discussions among States and stakeholders.

58. The special procedure mandate holders have tackled the challenges of the digital age for at least 15 years, constantly expanding the scope of their work to new aspects of digitalization across the spectrum of human rights. Thematic reports have provided nuanced analysis on topics including Internet access and surveillance, online information controls, hate speech, racism embedded in technology, health, worker's protections in the gig economy, education and the alleviation of poverty. Country visits and related reports as well as communications have enabled more targeted engagement with States and stakeholders.

59. Questions about human rights as they relate to digital technology have been raised many times in the universal periodic review, although with limited scope and depth. Treaty bodies have increasingly taken up topics relating to digital technology, including through general comments and general recommendations, which are particularly helpful in guiding the interpretation of human rights instruments. Concluding observations on key issues are also instrumental in helping States to adjust laws, policies and practices for compliance with human rights obligations. Due to their concise nature, however, universal periodic review recommendations and treaty body concluding observations do not always allow for a full elaboration of the issues.

50. The work of the High Commissioner and OHCHR on digital technologies covers a growing range of topics, including the gender digital divide, data privacy, surveillance, **end-to-end encryption**, Internet shutdowns, the role of technology in the context of peaceful assemblies, technical standards, the governance of content on Internet platforms and border governance. Thematic reports and studies have helped to advance the human rights discourse around digital technologies, while the B-Tech project has provided guidance to companies, States and other stakeholders on the implementation of the Guiding Principles on Business and Human Rights in the technology sector. OHCHR also provides advice on national and international law-making processes and plays a key role in the mainstreaming of human rights considerations in technology-related discussions across the United Nations. The endorsement in 2024 of human rights due diligence guidance for digital technology use, for example, was a crucial step towards ensuring that the United Nations uses digital technologies in ways that uphold human rights. In 2022, OHCHR and the University of California Berkeley published the *Berkeley Protocol on Digital Open Source Investigations*, identifying international standards for conducting online research into alleged violations of international criminal, human rights and humanitarian law.

¹⁷² See, for example, panel discussion on the right to privacy in the digital age, twenty-seventh session of the Human Rights Council (summary report (A/HRC/28/39)); panel discussion on the impacts, opportunities and challenges of new and emerging digital technologies with regard to the promotion and protection of human rights, forty-fourth session of the Human Rights Council (see <https://www.ohchr.org/en/hr-bodies/hrc/to-mark-the-75th-anniversary-of-the-convention-genocide>). See also <https://www.ohchr.org/en/hr-bodies/hrc/to-mark-the-75th-anniversary-of-the-convention-genocide>.

37 Something to Think About

When the Group talks about defining "infrastructure" in outer space, they mean deciding which kinds of satellites or space systems count as critical infrastructure that deserve special protection — for example, satellites that provide global communications, navigation (like GPS), or early-warning of missile launches. The idea is that harming these systems could have huge consequences for international security and civilian life.

But there's a problem: if you single out some satellites as specially protected, that could send the signal that all other satellites are fair game in a conflict. It could also muddy existing international law, which already says that force against another State's assets is restricted under the UN Charter. So the debate is: should you create a clear, narrow category of "infrastructure" for extra protection, or would that actually weaken the overall legal shield for all space objects? The definition matters because it decides which satellites get special protection — but choosing only some may risk undermining the protection of others.

How can states define and protect outer space "infrastructure" without undermining existing international law?

40 Definition

Space Situational Awareness (SSA) means knowing what is happening in space. It includes tracking satellites, space debris, and other objects in orbit as well as the ability to predict their future behavior in order to monitor risks like collisions or disruptions of satellites or space systems. SSA helps countries protect their space assets and avoid accidents.

61. The present mapping exercise demonstrates the relevance and necessity of using the international human rights framework to govern the development and use of digital technologies. International human rights law provides the guardrails required to maximize the benefits and added value of digital technologies, while reducing and containing their potential detrimental human rights impacts. Any protection gaps result from gaps in implementation rather than a lack of established obligations for States and responsibilities for businesses. Using a human rights lens ensures that the necessary actions can be directed in such a way as to avoid risks and realize opportunities to promote well-being.

62. Several reports of special procedure mandate holders and the High Commissioner have had a constructive impact on international and domestic processes. Many recommendations from such reports have been reflected in human rights resolutions. The reports are cited by courts, including regional human rights courts¹⁷³ and used by lawmakers and technology companies and in public debate. Such documents as the Rabat Plan of Action, developed under the auspices of OHCHR, shape international approaches to hate speech, including online. Communications sent by special procedure mandate holders to Governments and other stakeholders, including international organizations and businesses, remain an effective and nimble instrument for raising time-sensitive concerns in the rapidly evolving area of digital technologies. They provide detailed analysis relating, in particular, to specific laws or situations of concern and complement more general thematic reports and universal periodic review and treaty body recommendations. OHCHR also provides inputs and technical assistance to legislative and regulatory processes, where appropriate.

63. The mapping exercise revealed that the human rights system has responded to impacts on the full range of human rights. It also confirmed that the key human rights principles remain highly relevant in the digital realm, including equality and non-discrimination, participation, accountability, legality, legitimacy, necessity and proportionality and inclusion. With regard to economic, social and cultural rights, the exercise underscored the importance of accessibility, availability, affordability, adaptability and quality. It is also noteworthy that the concept of human rights due diligence is becoming a central element of efforts to respond to human rights challenges linked to digital technologies.¹⁷⁴

Gaps

64. While the impact of the outputs of the United Nations human rights ecosystem is undeniably positive, gaps can be identified. The large number of actors and processes in the human rights system addressing issues of digital technology can lead to overlap and, at times, tensions between outcomes, if coordination efforts are not sufficient. In recent years, an increasing number of resolutions have been dedicated to or prominently addressed issues of digital technology, including artificial intelligence. While this is a welcome sign of growing attention, risks include the duplication of effort, the thinning of sparse resources and ambiguity or lack of clarity, with the initiatives approaching related issues in different ways. Given the engagement of many actors on a broad range of topics, such inconsistencies and contradictions will arise, particularly if existing work is not considered. Some challenges may relate to the nature of certain outputs of the human rights mechanisms, including the necessary brevity of universal periodic review recommendations and treaty body concluding observations, sometimes limiting the space for a full reflection of the complexity of an issue. For example, a short recommendation urging the regulation of social media may fail to provide sufficient guidance on how to address adequately the human rights risks of such laws.

43 Definition

Dual-use space technology refers to space systems, satellites, or equipment that can be used for both civilian purposes (like communications, weather monitoring, or navigation) and military purposes (like surveillance, missile tracking, or counterspace operations). Because these technologies serve both peaceful and security-related roles, and can be operated by both civilian and military entities, it is harder to clearly define what is a weapon and set rules for what is allowed in space.

¹⁷³ See, for example, European Court of Human Rights, *Podchkanov v. Russia*, Application No. 33696/19, Judgment, 13 February 2024.

¹⁷⁴ See General Assembly resolution 78/213; Human Rights Council resolutions 53/29 and 54/21; and A/HRC/48/31 and A/HRC/53.42.

55. More needs to be done to ensure that the recommendations of the human rights system are implemented by decision makers on the ground. A major obstacle is the lack of visibility of relevant documents and of easy access to them, as they are currently dispersed across several databases and websites with limited search functionality. The United Nations Human Rights and Digital Technology Hub,175 which provides access to United Nations documents on technology and human rights, is a valuable initiative but its resources must be increased considerably for it to function as a one-stop shop.

56. Other forums, such as those dealing with trade and e-commerce, intellectual property, technical standard-setting and peace and security, should include a human rights approach in their discussions and decisions, taking into account the views and recommendations of the United Nations human rights mechanisms.

57. The mapping exercise also revealed a gap in tools and capacity to regularly provide detailed, context-specific advice on technology-related questions, especially in relation to legislative and large digital infrastructure processes, where such advice is urgently needed and often requested. The United Nations human rights system's capacity to provide detailed, tailored advice capable of addressing complex and intersecting issues arising from digital technologies must be expanded to respond to growing needs. This means increasing the pool of subject-matter experts capable of working on such issues as they relate to both human rights and specific technologies and sectors, with relevant regional experience and language skills and the support to build on and share good practices and ensure coherence.

X. Recommendations

58. The High Commissioner for Human Rights recommends that:

(a) States, businesses and other stakeholders duly take into account and implement the recommendations of the United Nations human rights ecosystem that apply to the design, development, operation, use and regulation of digital technologies;

(b) The capacity and effectiveness of the United Nations human rights ecosystem be further increased for comprehensive work on digital technology across the full range of rights and relevant technologies, in particular the ability to provide guidance for the implementation of the human rights obligations and responsibilities of States and businesses in the context of digital technologies;

(c) To address gaps in applying human rights in the digital sphere, an advisory service on human rights in the digital space be established by OHCHR to support Member States and stakeholders in integrating human rights into the design, development, operation, use and regulation of digital technologies, as suggested by the Secretary-General.¹⁷⁶ The service would:

(i) Support national and regional policy, regulatory and legislative efforts to integrate human rights standards and approaches relating to digital technology;

(ii) Encourage the technology sector to meet its human rights responsibilities by providing advisory views on key issues with regard to business responsibilities, as well as accountability and remedy;

(d) Appropriate measures be explored and taken to improve discussion and coordination among the United Nations human rights mechanisms to support complementarity and coherence in their work in the field of digital technologies. For

¹⁷⁵ See <https://www.digitalhub.ohchr.org>.
¹⁷⁶ See Our Common Agenda policy brief 5.

46 Did You Know That

Over 110 countries have ratified the Outer Space Treaty, making it one of the most widely accepted international agreements governing space activities.

46f Something to Think About

Under the Outer Space Treaty, countries are responsible for all space activities conducted from their territory or by their citizens, whether carried out by government agencies or private companies. States must authorize and continuously supervise non-governmental entities to ensure their activities follow the Treaty's rules. This responsibility covers not only Earth orbit but also the Moon and other celestial bodies. It means that countries must create national laws and regulatory frameworks to oversee private space actors, manage liability for accidents, and ensure all space activities are safe and lawful. With the rise of private space companies like SpaceX and Blue Origin, how can regulatory frameworks strike a balance between ensuring that private companies follow the Outer Space Treaty while also fostering innovation and attracting private investment in the space sector?

example, special procedure mandate holders could enhance the coordination of their work on digital technologies, including by the establishment of a coordination group. OHCHR could support and facilitate exchanges between the various mechanisms and hold regular briefings on technological, policy and regulatory trends;

(e) Efforts be enhanced to ensure that human rights are fully considered across all policy areas relevant to the governance of digital technologies, such as trade, e-commerce, intellectual property, competition law, peace and security, cybercrime¹⁷⁷ and cybersecurity. The Human Rights Council could take a leading role in this regard, for example by systematically hosting panels and other meetings with key actors in those fields or establishing forums and avenues for coordination;

(f) The information management infrastructure across the United Nations human rights ecosystem be improved to ensure streamlined access to all its outputs. Additional resources should be provided to enable OHCHR to create and maintain a state-of-the-art digital resource hub, building on existing databases and search tools and the Human Rights and Digital Technology Hub and aligning it with the OHCHR feasibility study;¹⁷⁸

(g) Capacity on digital technology and human rights be deepened through support of the integration of technical expertise into human rights work, using a variety of means, including dedicated technical expertise provided by OHCHR, strengthened joint efforts with technical entities and the enhancement of capacity-building and training;

(h) Approaches to building on the success of the universal periodic review be considered, including using peer-review approaches to allow for deeper discussions in such cross-cutting areas as digital technologies and human rights and to determine good practices, identify gaps and match resources with areas of need.

46 Did You Know That

Over 110 countries have ratified the Outer Space Treaty, making it one of the most widely accepted international agreements governing space activities.

46f Something to Think About

Under the Outer Space Treaty, countries are responsible for all space activities conducted from their territory or by their citizens, whether carried out by government agencies or private companies. States must authorize and continuously supervise non-governmental entities to ensure their activities follow the Treaty's rules. This responsibility covers not only Earth orbit but also the Moon and other celestial bodies. It means that countries must create national laws and regulatory frameworks to oversee private space actors, manage liability for accidents, and ensure all space activities are safe and lawful. With the rise of private space companies like SpaceX and Blue Origin, how can regulatory frameworks strike a balance between ensuring that private companies follow the Outer Space Treaty while also fostering innovation and attracting private investment in the space sector?

¹⁷⁷ See the work of OHCHR on the elaboration of a new cybercrime convention, available at https://www.unodc.org/documents/Cybercrime/AdHocCommittee/First_session/OHCHR_17_Jan.pdf; https://www.unodc.org/documents/Cybercrime/AdHocCommittee/6th_Session/Submissions/3431-stakeholders/OHCHR17.pdf; and <https://www.ohchr.org/en/documents/tools-and-resources/human-rights-and-draft-cybercrime-convention>.

¹⁷⁸ A/HRC/36/27.